

Period 6 Exercise Answers

E.1 In a closed container the motion of the molecules of a gas at room temperature is an example of

- a) static order.
- b) static disorder.
- c) dynamic order.
- d) dynamic disorder.

E.1 = d

E.2 Which of the following statements about the entropy of a system is NOT correct?

- a) It is a measure of the disorder of the system.
- b) It will increase or remain the same if the system is left to itself.
- c) It is the same as the energy of the system.
- d) It can be decreased if energy is added to the system.
- e) It can be increased without changing the temperature of the system.

E.2 = c

E.3 The entropy of one gram of liquid water at 0 °C is _____ one gram of ice at 0 °C.

- a) greater than
- b) less than
- c) the same as

E.3 = a

E.4 When the amount of disorder associated with a system increases, the entropy of the system

- a) increases.
- b) decreases.
- c) may increase or decrease.
- d) remains the same.

E.4 = a

E.5 When a closed system is left to itself, the entropy of that system will

- a) always increase.
- b) always decrease.
- c) always increase or remain the same.
- d) always decrease or remain the same.
- e) increase or decrease at random.

E.5 = c

E.6 Which of the following is NOT a statement of the second law of thermodynamics?

- a) Any system when left to itself tends toward equilibrium with its surroundings.
- b) A change of a system from its equilibrium situation involves an increase in entropy of the system.
- c) The entropy of a system that is in equilibrium with its surroundings remains constant.
- d) It requires energy to change a system from its equilibrium situation.
- e) ALL of the above are statements of the Second Law of Thermodynamics.

E.6 = b

Period 6 Answers

E.1 = d

E.2 = c

E.3 = a

E.4 = a

E.5 = c

E.6 = b